

## ABSTRACT

A system and method of scanning an artifact is disclosed. A single CCD can be configured to obtain color image data for the artifact using conventional imagery, gross shape data using a three-dimensional scanning technique, and high resolution shape data using an amplitude modulated laser scanning technique. A software driven computer processor controls the CCD and a series of illumination projectors to obtain color and gross shape data for an artifact. Algorithms then determine areas of the artifact that need to be scanned at a higher resolution. These areas are then re-scanned using an amplitude modulated laser scanning system. Once the entire artifact has been scanned completely, the color, gross shape, and high resolution shape data is combined into a single image file representative of the artifact. The key advancement is the ability of the present invention to dynamically determine areas of the artifact that require high resolution scans. Thus, only portions of the artifact need to be laboriously scanned while the gross shape data for the rest of the artifact suffices. The result is a significant reduction in time and storage requirements for creating and archiving image files for artifacts.